

# United Engineers



**United  
Engineers**

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## VALVES PRODUCT

Quality with expertise

# ♂ ABOUT US

26<sup>+</sup> YEARS OF  
**EXPERIENC**

## In the field of Manufacturing Engine Valves

The Firm has grown with good reputation in quality and developed vast network across the country. We are very conscious regarding quality parameter and supply chain management. We believe in business ethics and prudence to achieve client high level of satisfaction for that we have in house sufficient qualified personnel.





# OVERVIEW

## THE PRODUCTION CAPACITY

The Firm is having full fledged production cycle in house from forging to finished product. All the resources are available under the one roof of the firm.

**8 lakhs** Capacity to produce NOS. engine valves per annum.

The Firm is equipped with four forging plants, four CNC turning machine, two copy turning machine, four center less grinding machine, one induction hardening machine, two tip grinding machines and two seat grinding machines.

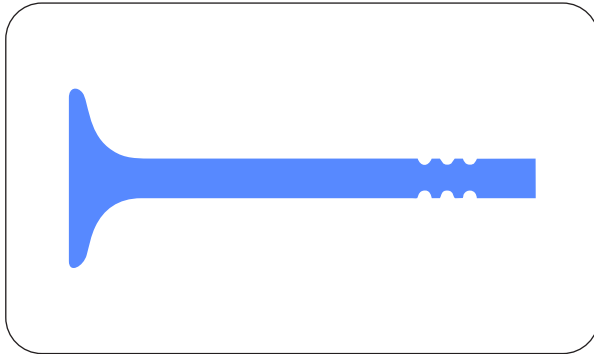


# MARKET OVERVIEW

UNITED ENGINEERS supplies Engine Valves across India thorough direct business channel. We have vast experience in manufacturing Engine Valves of all export series and we already supplying the Engine Valves abroad through merchant exporters

We are now quite capable to meet any requirements of export series engine valves as well as domestic model engine. valves.

# ♂ TYPE OF ENGINE VALVE



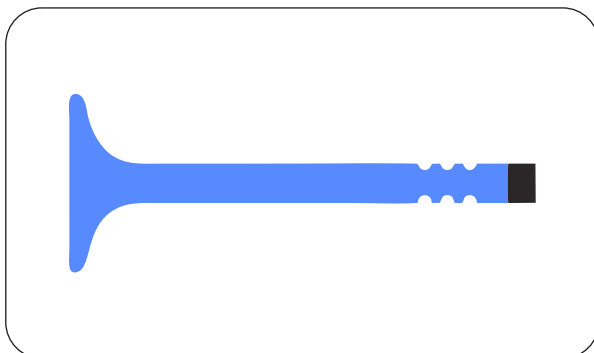
## MONOMETALLIC VALVES

Valve built of a single material that forms the stem and the head. They possess excellent mechanical properties although they are not so good at corrosion. Chromium-nickel-manganese-tungsten stainless steels are used for exhaust valves.



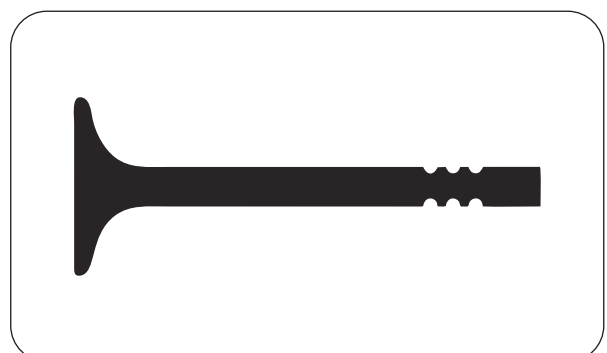
## CHROME PLATE VALVE

Through an electromechanical process a layer of hard chromium is stored over the stem. The thickness of this layer generally will depend on the level of the piece stress. The main function of the chromium layer is to reduce the friction between the stem and the valve guide, and to store among its micro-cracks, small amounts of lubricating oil. All this results in better operating conditions increasing. Therefore the useful life of the valve guide and stem.



## MONOMETALLIC VALVES

A small piece of martensitic steel is welded on the stem end when the entire valve is manufactured in stainless steel (non-quenchable). This is done to increase the impact and wear resistance of the stem end. Then, this tip is quenched to improve their mechanical properties.



## NITRATE VALVE

Nextech's Nitride Engine Valve is designed for highly corrosive environments. The Nitride coating significantly enhances corrosion and wear resistance, increasing valve lifespan and reducing friction between the valve stem and guide. Available in grey and black, this coating is ideal for any engine operating under extreme conditions.



## TECHNOLOGY & ADVANTAGE

- ⚙ The lightweight Engine Valves offer better engine performance, improved fuel efficiency and meet changing emission norms.
- ⚙ Withstand high peak firing pressure because of Flat Seat Valves for Heavy Duty Diesel Engines.
- ⚙ Improved fatigue and corrosion resistance due to higher case depth of Nitride Valves.
- ⚙ All our Valves are duly Heat Treated there by increasing toughness & wear resistance on Stem & Seating areas.
- ⚙ Valves have Hardened Tappet End to sustain Excess Cyclic Load from Overhead Cams.
- ⚙ Valves are made from OE specifications containing Martensitic & Austenitic Steel having High Creep Strength.
- ⚙ All Valves undergo 100% inspection for critical characteristics and achieve Cp and Cpk values.
- ⚙ Valves undergo 100% crack detection.
- ⚙ All Complaint parameters cover with Firewall Control.



## TECHNICAL SPECIFICATIONS

⚙ MATERIALS	⚙ ENGINE VALVE TYPES & FEATURES	⚙ SIZE RANGE
<ul style="list-style-type: none"><li>▪ Martensitic Steels</li><li>▪ Austenitic Steels</li><li>▪ Austenitic SteelSuper Alloys - Inconel Steel, Nimonic Steels</li></ul>	<ul style="list-style-type: none"><li>▪ Mono-Metal Valves</li><li>▪ Seat Stellite</li><li>▪ Tip &amp; Seat Induction Hardening</li><li>▪ Stainless Steels with or without Tufftriding</li><li>▪ Hard Chrome/Nitrided Stem</li><li>▪ Profile &amp; Through Hardened Grooves</li></ul>	<ul style="list-style-type: none"><li>▪ Valve Stem Diameter: 4 to 16 mm</li><li>▪ Valve Head Diameter: 20 to 70 mm</li><li>▪ Valve Length: 50 to 300 mm</li></ul>



## ENGINE VALVES MANUFACTURE FOR

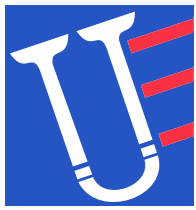
- Heavy Duty Vehicles (HCVs)
- Light Duty Vehicles (LCVs)
- Tractors & Farm Equipment
- Passenger Cars
- Two & Three Wheelers
- Stationary Diesel Engines

## SIZE RANGE

Valve Stem Diameter : 4 to 12 mm

Valve Head Diameter : 20 to 55 mm

Valve Length : 50 to 150 mm



# United Engineers

## Get Into Touch



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